63D CONGRESS 2d Session | SENATE | DOCUMENT No. 438

10

NATIONAL AID TO GOOD ROADS

ARTICLE

FROM THE

NORTH AMERICAN REVIEW OF SEPTEMBER, 1913

By

JONATHAN BOURNE, JR.

CHAIRMAN, JOINT COMMITTEE ON FEDERAL AID IN CONSTRUCTION OF POST ROADS

PRESENTED BY MR. BRYAN

FEBRUARY 20, 1914.—Referred to the Committee on Printing
MARCH 6, 1914.—Reported favorably and ordered to be printed

WASHINGTON
1914

UNITED STATES OF AMERICA
GOVERNMENT PRINTING OFFICE

NATIONAL AID TO GOOD ROADS.

[From the North American Review, September, 1913.]

By Jonathan Bourne, Jr.

The idea of national participation in highway improvement is by no means new. As long ago as 1802 Congress passed an act for the admission of the State of Ohio and included in the act a provision that 5 per cent of the net proceeds of the sales of public lands in the State should be applied to the laying out and construction of public roads connecting the Ohio River with navigable waters emptying into the Atlantic.

The money thus to be expended was Federal money. The road to be constructed was an interstate road. The obligation was one assumed by the Government chiefly in behalf of the State of Ohio, but also for the benefit of people of other States. Subsequent acts for the admission of Illinois, Indiana, and Missouri contained similar provisions as to the expenditure of 5 per cent of the net proceeds from public-land sales, and the western terminus of the proposed road was extended to Jefferson City, Mo.

The States named accepted the provisions of the acts mentioned, and the Legislatures of Maryland, Virginia, and Pennsylvania enacted laws permitting the Government to construct the road through their jurisdictions. The first appropriation for the road was made by Congress in 1806 and every administration for nearly 40 years thereafter made appropriations for the road, known as the Cumberland Road, although President Monroe vetoed one bill for this purpose, giving as his reason that he believed Congress had no such authority. Nevertheless, by the action of the National Government for a period of 40 years and by the separate action of several of the strongest of the States, the power of Congress to build roads was recognized. The total amount appropriated for the Cumberland Road was over $6,800,000. The road was ultimately taken over by the States through which it passed.

I have stated these historical facts, not for the purpose of establishing by precedent the validity of appropriations of this kind, for I should assert the right of Congress to appropriate money for and build public roads, even though there were no precedent. My object is to show the early date in American history when this Federal power was recognized.

The constitutionality of the appropriations was supported chiefly upon some one or all of the following express Federal powers: To establish post roads, to regulate commerce, to declare war, to provide for the common defense, to promote the general welfare.

Among those of legal training, a technical discussion of the constitutionality of national highway appropriations would no doubt be

interesting, but I believe the time has long since passed when controversy over this question could be deemed appropriate. Even a cursory review of the ever-expanding activities of this Government, covering the purchase of Louisiana and Alaska, the improvement of harbors and interior rivers, appropriations for educational work, construction of reclamation projects, purchase of private lands for the formation of public forest reserves for protection of watersheds, demonstrates that a discussion of the constitutional question is purely academic.

Federal aid to good roads will accomplish several of the objects indicated by the framers of the Constitution: Establish post roads, regulate commerce, provide for the common defense, and promote the general welfare. Above all, it will promote the general welfare.

From an economic standpoint, the most important problem now before the American people is that of rural highway improvement. Transportation is the key to industrial and commercial prosperity. The United States leads every other country in the world in steam and electric railway development, but is behind several nations in the development of its wagon roads. This is not said in criticism of this country, for America is yet young in years of industrial growth. The leading European nations laid out their road systems and constructed their best-known highways while the major portion of this country was still a wilderness.

The fact remains, however, that the improvement of our highways is not keeping pace with other transportation development, and as a consequence the wagon haul to and from the railroad is relatively the greater part of the cost of transportation between producer and consumer. This phase of the subject has been so frequently and so thoroughly discussed by transportation experts that the facts are now well known. No one now questions the social and economic importance of highway improvement. The sole problem now is to devise a means of attaining the desired end. To the solution of this problem I have devoted many months of close attention and believe I have devised a plan by the adoption of which Federal aid to good roads can be provided without incurring any of the evils so likely to attend a Government undertaking of such broad scope and wide application.

The bill I have suggested, briefly stated, permits a State to deposit its 50-year 4 per cent bonds in the United States Treasury and receive the face value thereof from funds raised by the sale of Government 3 per cent nontaxable bonds, the State bonds to be retired without the payment of the principal otherwise than by crediting the States with the difference between 3 per cent and 4 per cent, together with 3 per cent compound interest on this difference. In other words, the States would pay the same rate of interest usually paid on State bonds, and the difference between that rate and the lower rate at which Government bonds will sell would be credited to a sinking fund which, with interest thereon, would amount to the principal in a little less than 50 years.

(NOTE.—Since this article was written the bill has been modified by permitting States to deposit bonds running not less than 20 years or to redeem their 50-year bonds at any time after 20 years, but upon redemption of any such bonds the State must pay the principal less the amount of sinking fund accumulated thereon.)

In principle, this is the system of financing adopted by Great Britain many years ago in connection with the purchase of landed estates in Ireland and the resale of same to the tenants. The Irish land-purchase act of 1903 contains the latest application of the plan in Great Britain. Under that act British securities are issued bearing $2\frac{3}{4}$ per cent interest, while the Irish tenants repay the loan at $3\frac{1}{4}$ per cent, but the principal of the loan is deemed to have been paid whenever the sinking fund, with accumulation of compound interest thereon at $2\frac{3}{4}$ per cent, equals the amount of the loan. The financing feature of my plan is the same, but I have added a number of other features which I deem essential in order to produce desired results.

My plan provides for Federal loans to the total amount of $1,000,000,000 for construction and the apportionment of this aid among the States upon a basis of area, population, assessed valuation, and road mileage, each factor being given equal weight. Thus, each State will receive aid in accordance with its needs.

This plan also provides for aid in maintenance, each State to receive annually from the Federal Treasury an amount equal to 2 per cent of the amount of State bonds on deposit, provided the State expends a similar amount for maintenance. This plan leaves it to the State to determine the amount of aid it shall receive and eliminates the possibility of a pork barrel.

It is also provided in the suggested plan that no State shall receive Federal aid until it has established a State highway commission with general supervision over the expenditure of funds received from the Government and also that the bonds of the State shall not be accepted if the total bonded indebtedness of the State, including the bonds issued in accordance with the provisions of the national highway law, shall exceed 10 per cent of the assessed valuation. These requirements insure efficient supervision of road expenditures and prevent such an excessive indebtedness as might impair the credit of a State or cast doubt upon the soundness of its bonds. In order to prevent throwing too large an amount of Federal bonds upon the market at one time, the plan also provides that no State shall apply for more than 20 per cent of its allotment in any one year.

To provide a supply of qualified engineers to supervise highway construction and maintenance, I have included in my plan a provision for the establishment of an academy of highway and bridge engineering to be located at Washington, D. C. I believe such a school would be far more efficient and turn out more highly qualified engineers than would numerous schools not so well equipped for the work and scattered over the country. It would be in many respects a post graduate school, giving the special instruction which local colleges are not prepared to give. It would establish an esprit de corps among the highway engineers of the country and maintain high standards of work. It would be a clearing house, if you please, for information and new ideas relative to highway improvement.

In connection with such a school I would have a testing laboratory maintained, so that any State road official could send road material to be tested free of charge and by the most approved methods. Here would be located the best authorities in the world on highway problems.

As the provisions of the bill I have suggested are brief and as the thorough consideration of any plan before adoption is of utmost importance, I shall present the text of the bill in full:

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That in order to establish, construct, improve, or maintain public roads that are now or may hereafter be needed for use as post roads, military roads, or for interstate commerce, there be, and hereby is, created a fund to be known as the United States highway fund. Said fund shall be raised in the manner herein provided, but the Treasurer of the United States is hereby authorized to receive and place to the credit of said fund any money that may be contributed from other sources and to expend the same upon the order of the United States Highway Commission or in accordance with the conditions of the contribution.

Sec. 2. That for the purpose of providing money for the United States highway fund the Secretary of the Treasury is hereby authorized and directed to issue and sell, at par with accrued interest, coupon or registered bonds of the United States in such form as he may prescribe and in denominations of $20 or multiples of that sum, said bonds to be payable in coin fifty years from the date of issue, and to bear interest, payable in coin semiannually, at the rate of three per centum per annum, the total amount of said bonds not to exceed $1,000,000,000, and the issue and sale of same not to exceed such amounts as may be necessary from time to time to enable the Treasurer of the United States to make payments from the United States highway fund to the several States in accordance with the provisions of this act. Bonds issued under authority of this act, or the income therefrom, shall not be subject to taxation of any kind for any purpose. Bonds authorized by this section shall be first offered at par as a popular loan under such regulations, prescribed by the Secretary of the Treasury, as will give opportunity to the citizens of the United States to participate in the subscriptions to such loan, and in alloting said bonds the several subscriptions of individuals shall be first accepted, and the subscriptions for the lowest amounts shall be first allotted. Any portion of any issue of said bonds not subscribed for as above provided may be disposed of by the Secretary of the Treasury, at not less than par, under such regulations as he may prescribe, but no commissions shall be allowed or paid thereon; and a sum not exceeding one twenty-fifth of one per centum of the amount of the bonds herein authorized is hereby appropriated, out of any money in the Treasury not otherwise appropriated, to pay the expense of preparing, advertising, and issuing the same.

Sec. 3. That before any State shall be entitled to take advantage of the provisions of this act it shall establish by law a State highway commission having general supervision of road construction and improvement in that State, which said commission shall have general supervision of the expenditure of money received from the United States highway fund, subject only to the provisions of this act and of State laws not inconsistent herewith.

Sec. 4. That the United States highway fund shall be apportioned and credited to the several States in the following manner: The United States highway commission, hereinafter created, shall ascertain in the most practicable manner from the best information available the total land area, the population according to the last Federal census, the total assessed valuation of all taxable property, and the total mileage of public highways in each of the several States, and shall compute the percentage of the total of each of these four items possessed by each State. They shall then compute the average of the four percentages for each State, and this average shall be the per centum of the $1,000,000,000 United States highway fund that shall be apportioned and credited to each State. Said commission shall notify the Treasurer of the United States of the result of their ascertainment and computation, which shall be made as of a date to be fixed by the commission. Such fund so apportioned shall be paid to the States only in accordance with the provisions of this act.

Sec. 5. That whenever any State, through its duly authorized agents, shall apply for any part of its share of the United States highway fund, but not exceeding twenty per centum thereof in any year, and shall deposit with the Treasurer of the United States its bonds for such amount payable in fifty years and bearing interest, payable semiannually, at the rate of four per centum per annum, the Secretary of the Treasury shall issue and sell, at par and accrued interest, in the manner prescribed in section two, United States highway bonds to the amount that may be necessary to pay to said State the amount of money applied for, and upon the sale of said bonds shall pay over the proceeds to the custodian of the public funds of the State: *Provided*, That the bonds of any State shall not be accepted if the total amount of bonds of such State, including the bonds issued to take advantage of the provisions of this act, shall exceed ten per centum of the amount of the assessed valuation of all taxable property in such State:

Provided further, That any State desiring to do so may deposit with the Treasurer of the United States its four per centum bonds maturing in not less than twenty years, or may redeem its fifty-year bonds at any time after twenty years from date of issue, but upon redemption of such bonds, whatever the period for which issued, such State shall pay to the Treasurer of the United States, in addition to the balance due on the principal after deducting the accumulated sinking fund, a premium of two per centum on such balance due on bonds redeemed, together with accrued interest. When the Treasurer of the United States shall receive any payment of interest on State bonds deposited in the manner above provided he shall devote three-fourths thereof to the payment of the interest due on the corresponding United States highway bonds, and one-fourth, herein designated as a sinking fund, he shall deposit in the Treasury of the United States to be used from time to time for the redemption of United States highway bonds as provided herein. The Treasurer of the United States shall keep an account with each State that shall deposit bonds and receive funds under the provisions of this act, and shall credit said State with interest compounded annually at the rate of three per centum per annum on the sinking funds paid in. Money received upon the principal of State bonds shall also be credited to the sinking fund, but no interest credit shall be allowed the State thereon. At the time of the maturity of the bonds deposited by any State, if all payments have been made when due, the Treasurer of the United States shall cancel said bonds and return them to the State issuing the same. Whenever and each time the sinking fund accumulation shall amount to $1,000,000, then the Secretary of the Treasury shall, and he is hereby directed to go into the open market and purchase, at par if possible, $1,000,000 par value of the United States highway bonds. If unable to purchase all or any at par then he is authorized and directed to pay such premium as necessary, determined by competition after public notice of not less than thirty days, but not exceeding a premium of two per centum and accrued interest. If he be unable thus to secure the full amount of bonds necessary to comply with this provision, then he is authorized and directed to call at par, plus premium of two per centum and accrued interest, such bonds, determined by drawing of bond numbers from among the largest denominations outstanding, as will make up the $1,000,000 purchase. These bonds thus purchased out of the sinking fund accumulation shall be retained in the United States Treasury, being stamped by the United States Treasurer "Nonnegotiable," but "kept alive," in order that the United States Government may receive for the sinking fund the benefit of the interest payments on the bonds thus purchased.

Sec. 6. That on the first day of February of each year the Treasurer of the United States shall pay to the custodian of the public funds of each State, from any funds in the Treasury not otherwise appropriated, an amount of money equal to two per centum of the amount of State bonds said State has deposited with the Treasurer of the United States under the provisions of this act. The money so paid shall be expended by said State only in the maintenance of public highways. The Treasurer of the United States shall withhold the payment of money to any State under the provisions of this section in the event that such State default in payment of any interest or principal due, or in the event that the United States highway commission herein created shall certify to said United States Treasurer that money theretofore paid to said State for maintenance purposes has not been expended with reasonable effectiveness for the maintenance of public highways or that the State has failed to expend an equal amount of its own funds during the preceding twelve months for the same purpose.

Sec. 7. That there is hereby created a United States highway commission, to be composed of the chairman of the Senate Committee on Post Offices and Post Roads, the chairman of the House Committee on Roads, and the Director of the Office of Public Roads. Such commission shall have only an advisory voice in the expenditure of the United States highway fund in the several States. It shall have its head office in the District of Columbia, but may create highway divisions, never exceeding in number one for each State, and may maintain a division office in charge of a United States highway engineer in each division. Said commission shall have power to employ such clerical and expert assistance as may be provided for by appropriations made by Congress from time to time, and may require the assistance and cooperation of the officers and employees of any department in its work.

Sec. 8. That for the further aid and encouragement of highway improvement in the several States, the United States highway commission shall maintain in the District of Columbia a school for special instruction in practical highway and bridge engineering, the entrance requirements of which school shall include completion of preparatory courses in civil engineering and such other studies as the commission shall specify qualifying the student to enter upon the special study of the practical problems of highway and bridge engineering. The rules, regulations, and curriculum

of said school shall provide for instruction for two years for one student from each congressional district, selected by competitive examination, but if there be no qualified applicant for admission from any congressional district such vacancy may be filled by the admission of a student from some other congressional district in the same State. Upon the admission of a student to the school of highway engineering such student shall be paid, as traveling expenses, 4 cents for each mile of distance necessarily traveled in going from his home to Washington, District of Columbia, and at the end of each calendar month thereafter during the continuance of such student in said school he shall be paid $50 to cover living and incidental expenses. The United States highway commission shall make rules and regulations for the management of said school and shall have entire control of same, subject only to the Constitution and laws of the United States. In connection with said school said commission shall maintain a testing laboratory in which said commission shall cause tests to be made of road or bridge building material free of charge at the request of the duly authorized highway officials of any State.

SEC. 9. That for the purpose of carrying out the provisions of this act there is hereby appropriated, out of any money in the United States Treasury not otherwise appropriated, the following amounts, or so much thereof as may be necessary:

For the renting of suitable quarters for the United States highway commission in the District of Columbia, $———.

For the renting of suitable quarters for the school of highway and bridge engineering, $———.

For the payment of salaries of clerical and expert assistance for the United States highway commission, $———.

For the payment of salaries of instructors in the school of highway and bridge engineering, $———.

For the purchase of testing laboratory equipment and office furniture and supplies, $———.

For the payment of the salaries of ——— division engineers, $———.

For the renting of quarters for ——— division engineers, $———.

The following table shows the percentage and amount of apportionment each State would receive under a plan giving area, population, assessed valuation, and road mileage equal weight in the calculation, these percentages being computed to only two decimal places and the amounts given in round numbers:

State.	Land area in square miles.	Population, 1910.	Assessed valuation, fiscal year 1912.	Total mileage of roads.	Apportionment to each State.	
					Per cent.	Amount.
Alabama	51,279	2,138,093	$484,851,212.00	49,639	1.72	$17,200,000
Arizona	113,840	204,354	140,338,191.00	5,987	1.13	11,300,000
Arkansas	52,525	1,574,449	[1] 425,478,614.00	36,445	1.44	14,400,000
California	156,092	2,377,549	2,919,342,889.00	48,069	3.59	35,900,000
Colorado	103,658	799,024	430,000,000.00	29,693	1.59	15,900,000
Connecticut	4,820	1,114,756	[1] 1,041,334,019.00	12,583	.87	8,700,000
Delaware	1,965	202,322	92,575,760.00	3,000	.14	1,400,000
Florida	54,861	752,619	218,887,518.00	17,579	.95	9,500,000
Georgia	58,725	2,609,121	842,000,000.00	82,230	2.45	24,500,000
Idaho	83,779	325,594	418,780,394.00	18,403	1.16	11,600,000
Illinois	56,002	5,638,591	2,343,673,232.00	94,141	3.94	39,400,000
Indiana	35,885	2,700,876	1,891,602,077.00	67,996	2.51	25,100,000
Iowa	55,586	2,224,771	713,318,825.00	102,427	2.50	25,000,000
Kansas	81,774	1,690,949	2,746,900,291.00	98,302	3.28	32,800,000
Kentucky	40,181	2,289,905	1,089,265,143.00	53,744	1.98	19,800,000
Louisiana	45,409	1,656,388	546,650,157.00	24,962	1.32	13,200,000
Maine	29,895	742,371	478,192,054.00	25,528	.92	9,200,000
Maryland	9,941	1,295,346	979,309,976.00	16,773	.99	9,900,000
Massachusetts	8,039	3,366,416	4,249,699,855.00	17,272	2.73	27,300,000
Michigan	57,480	2,810,173	[1] 2,288,000,000.00	68,906	2.88	28,800,000
Minnesota	80,858	2,075,708	1,212,567,794.00	79,323	2.59	25,900,000
Mississippi	46,362	1,797,114	[1] 399,029,000.00	39,619	1.48	14,800,000
Missouri	68,727	3,293,335	1,736,371,588.00	107,923	3.35	33,500,000
Montana	145,776	376,053	346,550,585.00	23,319	1.72	17,200,000
Nebraska	76,808	1,192,214	463,371,889.00	80,338	2.05	20,500,000
Nevada	109,821	81,875	[1] 85,347,058.44	12,751	1.12	11,200,000
New Hampshire	9,031	430,572	397,647,530.00	15,116	.51	5,100,000
New Jersey	7,514	2,537,167	2,289,770,280.78	14,842	1.77	17,700,000
New Mexico	122,503	327,301	[2] 72,000,000.00	16,920	1.35	13,500,000

[1] 1911. [2] Rough estimate.

State.	Land area in square miles.	Population, 1910.	Assessed valuation, fiscal year 1912.	Total mileage of roads.	Apportionment to each State.	
					Per cent.	Amount.
New York	47,654	9,113,614	$11,022,985,914.00	79,279	7.86	$78,600,000
North Carolina	48,740	2,206,287	[1] 494,708,570.00	48,285	1.74	17,400,000
North Dakota	70,183	577,056	294,770,325.00	61,593	1.56	15,600,000
Ohio	40,740	4,767,121	6,400,000,000.00	88,861	5.02	50,200,000
Oklahoma	69,414	1,657,155	1,326,840,833.00	71,325	2.33	23,300,000
Oregon	95,607	672,765	[2] 905,011,679.00	29,475	1.66	16,600,000
Pennsylvania	44,832	7,665,111	5,917,119,205.25	87,387	5.65	56,500,000
Rhode Island	1,067	542,610	552,991,854.00	2,121	.39	3,900,000
South Carolina	30,495	1,515,400	291,531,003.00	32,075	1.15	11,500,000
South Dakota	76,868	583,888	354,278,413.00	56,354	1.58	15,800,000
Tennessee	41,687	2,184,789	625,010,886.00	45,913	1.70	17,000,000
Texas	262,398	3,896,542	2,515,594,636.00	128,971	5.66	56,600,000
Utah	82,184	373,351	200,299,207.00	8,320	.96	9,600,000
Vermont	9,124	355,956	221,447,887.00	14,406	.42	4,200,000
Virginia	40,262	2,061,612	907,273,651.00	43,399	1.73	17,300,000
Washington	66,836	1,141,990	1,005,086,251.00	34,284	1.64	16,400,000
West Virginia	24,022	1,221,119	1,119,828,173.00	32,109	1.32	13,200,000
Wisconsin	55,256	2,333,860	2,077,925,166.00	61,090	2.56	25,600,000
Wyoming	97,594	145,965	182,028,280.00	10,569	1.05	10,500,000
Total and average	2,974,099	91,972,266	67,763,587,864.47	2,199,646	....	1,000,100,000

[1] 1911. [2] 1910.

The practical working of the plan I have suggested may be illustrated by supposing that all the States avail themselves of the opportunity of utilizing the superior credit of the United States up to the 20 per cent annual limitation for each State. We would have $200,000,000 of 50-year semiannual 4 per cent State bonds deposited with the Treasurer of the United States, upon which collateral the Secretary of the Treasury would offer for popular subscription, at not less than par and upon a pro rata allotment basis, $200,000,000 of 3 per cent Federal bonds, and from the $200,000,000 obtained in the sale of same pay to the States the par amount of their bonds. The Federal Government would receive from the States, in semiannual payments, interest at the rate of 4 per cent, or $8,000,000 annually. Out of this it would pay to the investors in the Federal bonds $6,000,000 annually, as interest on $200,000,000 United States 50-year 3 per cent bonds, leaving an excess of $2,000,000 annually received from the States over what the Federal Government would pay in interest charges on a similar amount of Federal bonds. This excess forms a sinking fund.

On this excess of $2,000,000 the Federal Government would allow 3 per cent annual compound interest. At the end of 46.89 years this sinking fund would amount, under this plan, to $200,000,000, so that the Federal Government would have the funds to pay off the bonds it had issued to the public for which it held the State bonds as collateral, and at the end of 50 years from the date of issuance of the State bonds the Federal Government would return said bonds to the respective States marked "canceled." By depositing their bonds with the Federal Government as collateral and utilizing the superior credit of the Federal Government in getting money at 3 per cent, the States would ultimately have received $200,000,000 cash at 1 per cent cheaper interest than they themselves could secure in a public sale of their own bonds. This utilization of the Federal Government's superior credit, without any greater expense to the States than the interest charge alone if they sold their bonds in the open market, together with the Federal Government's 3 per cent annual interest allowance, would provide the fund with which the

obligation of the States would be entirely liquidated at the expiration of 50 years.

The money received from the sale of the Federal bonds would be turned over to the highway commissions in the States, which commissions should be directly accountable to the electorates of the States, thus preventing interference with State rights and eliminating any direct legal supervision on the part of the Federal Government and minimizing the danger of building up a large Federal bureau. At the same time cooperation would be assured, because of realization on the part of the members of the State highway commissions that, although the Federal district engineers would have no legal supervision of the expenditure of the money put into construction of roads, yet in their inspection of the maintenance of roads the Federal and district engineers would necessarily learn whether the road construction had been honest and intelligent, and the anticipation of this maintenance inspection by Federal agents would cause the State engineers to do better construction work.

There would seem to be little doubt that the people of the United States would buy the Federal 3 per cent bonds at par. These bonds, being nontaxable, would be the equivalent of a 4 per cent taxable bond, especially if the contemplated income tax be enacted.

On June 14, 1912, the banks of the United States showed the following individual deposits:

	Number.	Amount.	Average rate of interest paid depositors.
National banks	7,372	$5,825,461,163.36	No data.
Mutual savings banks	630	3,608,657,828.11	3.90
Stock savings banks	1,292	842,897,859.61	3.03-3.64
State banks	13,381	2,919,977,897.99	No data.
Private banks	1,110	152,494,618.90	No data.
Loan and trust companies	1,410	3,674,578,238.92	No data.
Total	25,195	17,024,067,606.89	

Since 3.9 per cent is the average rate of interest to depositors in the 630 mutual savings banks, and 3.03 per cent to 3.64 per cent is the rate of interest paid depositors in the 1,293 stock savings banks, there can be no doubt that depositors in these institutions would prefer the Federal 3 per cent nontaxable bonds with the Government credit behind them to the security and interest offered by the savings banks.

Several States and municipalities have recently experienced difficulty in floating large bond issues sold en bloc. One or two cities have overcome the difficulty by selling the bonds in small denominations to small investors. This plan provides against any such contingency by requiring that bonds be in denominations of $20 and sold by popular subscription and prorated among the subscribers if the issue should be oversubscribed. In view of the amount of money now on deposit in banks with or without interest, and in view of the fact that on June 30, 1912, there was over $1,700,000,000 in money in the United States not on deposit in the banks, there is very little reason to doubt but that there would be a very general desire to take up the highway bonds as rapidly as issued, which could not be at the rate of more than $200,000,000 in one year and probably would be less than that.

Maintenance of roads is of no less importance than construction. By the suggested plan the Federal Government would contribute to each State 2 per cent of the total amount of Federal aid that had been extended to the State for construction in utilization of the Federal Government's superior credit. Thus, the States, if they deposited the aggregate of $200,000,000 of State bonds during any one year and received $200,000,000 in money from the Federal Government, would thereafter receive $4,000,000 annually as a direct contribution from the Government, provided these States expended an equal amount for annual maintenance.

While some Federal inspection will be necessary to determine whether States have expended their own and the Government maintenance funds in an effective manner, yet the plan suggested avoids building up a large force of Federal employees. Such a force presents obvious dangers which might be avoided if the United States were divided into Federal road districts composed of States or groups of States containing approximately 50,000 miles of roads and create a number of district road and bridge engineers, so that there would be one Federal representative for each district. All other employees would be under State control.

The duties of this engineer then would be to ascertain and report to the United States highway commission in Washington whether the annual maintenance contribution of the Government apportioned to that district had been intelligently and honestly expended. He could also give lectures as opportunity permitted, regarding road engineering and practical construction, and furnish the State highway commissions with such information as the Federal bureau had touching on the subject, but neither he nor his superior, the Federal director of public roads, would have the right to withhold the Federal maintenance annually contributed to his district simply because his judgment differed from that of the State highway commission with reference to intelligent and honest expenditure of the Federal part of the maintenance fund. The United States highway commission, consisting of the chairmen of the Senate Committee on Post Offices and Post Roads, the House Committee on Roads, and the director of public roads, would have the final voice and decision as to whether this fund should be withheld or not.

Briefly summarized, the plan of Federal aid here outlined insures extensive road construction and adequate maintenance over a long period of years, enlists the cooperation of the States, provides for efficient supervision, guards against the subservience of State officials to a Federal bureau, prevents the building up of a large organization that could be used for political purposes, and avoids legislation that might degenerate into a pork barrel. Adoption of this plan will result in a vast saving of cost of transportation on highways and a corresponding increase in the value of farm property. The increase in the value of property will far exceed the investment in construction, and the saving in cost of transportation will far exceed the annual expenditure for maintenance. From the standpoint of good business judgment there is no investment that offers larger returns than expenditures for highway improvement, provided the expenditures be made in accordance with a systematic plan that guards against waste.

JONATHAN BOURNE, Jr.

○